

REMARKS

This application is a continuation of U.S. Patent Application Serial No. 09/935,275, filed August 22, 2001.

In the present Preliminary Amendment, claims 1-20, 24-30, 35 and 38-44 are cancelled without prejudice and new claims 45-56 are added. Thus, claims 21-23, 31-34, 36, 37 and 45-56 are pending in the present application.

Entry and consideration of the present Preliminary Amendment, prior to the first Office Action, are requested.

In an Office Action mailed 27 February 2003 in the parent case, claims 21-23, 52 and 53 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hart (U.S. Patent 5,915,289) (hereinafter "Hart") in view of Greene et al. (U.S. Patent 5,262,585) (hereinafter "Greene") and Tanaka (U.S. Patent 6,031,176) (hereinafter "Tanaka"). Claims 45 and 46 in the present application are substantially identical to claims 52 and 53, respectively, in the parent application.

The rejection is respectfully traversed.

Claim 21, as amended, recites an electronic pad receiving a strike, detecting the strike and outputting a signal representative of the strike, comprising, *inter alia*:

" . . .

a sheet sensor provided on a lower surface of a peripheral edge portion of said first frame and detecting an operation with respect to the lower surface of the peripheral edge portion;

wherein said sheet sensor extends circumferentially along a part of said first frame around the peripheral edge, but not along all of the peripheral edge of the first frame."

Neither Hart, Greene nor Tanaka, alone or in combination, disclose or suggest the claimed invention, including the above-quoted features.

Hart is directed toward an electronic signal apparatus that significantly shortens the vibratory response of a prolonged resonating acoustical tone sensed by a transducer. The Examiner recognizes that Hart does not disclose "a striking sensor on the frame". Accordingly, the Examiner cites Greene as disclosing "that use of a striking sensor is well-known". However, neither Hart nor Greene disclose or suggest a sheet sensor that extends

circumferentially along a part of said first frame around the peripheral edge. Accordingly, the Examiner cites Tanaka as disclosing this feature.

Claim 21 has been amended to further distinguish applicants' invention from Tanaka. Claim 21, as amended, recites that the sheet sensor "extends circumferentially along a part of said first frame around the peripheral edge, but not along all of the peripheral edge of the first frame".

The Examiner asserts that Tanaka discloses "a sheet (flat) sensor 35 which extends circumferentially around the edge of a percussion instrument." However, Tanaka teaches that the rim sensor 35 extends around the entire circumference of the percussion instrument and that the rim sensor 35 is ring shaped. (See FIG. 2; col. 4, lines 44-47.)

Tanaka does not teach or suggest that a sheet sensor extends circumferentially along a part of said first frame around the peripheral edge, but not along all of the peripheral edge of the first frame, as recited in applicants' amended claim 21.

Thus, while the combination of references is respectfully traversed, even if Tanaka, Hart and Greene could be combined as suggested by the Examiner, the combination would not meet the claimed invention. Therefore, claim 21 would not have been obvious at the time the invention was made to a person having ordinary skill in the art. Thus, the Patent and Trademark Office has not made out a *prima facie* case of obviousness under the provisions of 35 U.S.C. 103(a).

Claims 22, 23 45 and 46 depend directly or indirectly from amended claim 21 and are, for at least this reason, believed to be allowable.

In the Office Action mailed 27 February 2003 in the parent case, claims 31-34, 36, 37 and 56 were rejected under 35 U.S.C. 103(a) as being unpatentable over Greene in view of Arteaga (U.S. Patent 5,922,980) (hereinafter Arteaga) and Tanaka. Claim 47 in the present application is substantially identical to claim 56 in the parent application.

The rejection is respectfully traversed.

Claim 31, as amended, recites an electronic pad comprising:

"a first frame having a peripheral edge portion, at least a part of the peripheral edge portion having a step formed downward; and

a sheet sensor located on the step of the peripheral edge portion of the first frame."

Neither Greene, Arteaga nor Tanaka disclose or suggest the claimed invention, including the above-quoted features.

Greene discloses an electronic cymbal system. In Greene, the cymbal has a beveled edge on the outer periphery of a disk, but there is no sheet sensor located specifically on the beveled edge to detect a strike. Moreover, the beveled edge in Greene is used only to "minimize the abrasiveness of the edge of the disc as seen by the common drum stick" and to "create a more palatable playing feel and it increases the playing life of a player's drum sticks". (See col. 3, line 58 through col. 4, line 2.) The beveled edge in Greene is not used to suppress vibration on the peripheral edge portion of the frame where there is no sheet sensor.

The Examiner recognizes that Greene does not disclose "a frame or cymbal having a downward annulus step around the peripheral edge". Accordingly, the Examiner cites Arteaga as disclosing this feature. Arteaga discloses a sound muffling device for a cymbal. Although the Examiner points to Figures 3 and 4 of Arteaga as disclosing a frame or cymbal having a downward annulus step, what is actually disclosed in Figures 3 and 4 of Arteaga is a 15 inch cover being applied to a 14 inch cymbal. (See FIGS. 3 and 4; col. 3, lines 26-31.) In other words, the cover in Arteaga can be used on cymbals having diameters smaller than the diameter of the cover. Thus, what is actually seen in Figures 3 and 4 of Arteaga is the sound muffling device extending downward where there is no cymbal. Accordingly, there is no downward step on a peripheral edge in Arteaga.

Furthermore, there is no motivation or suggestion to combine Greene with Arteaga. Green teaches a disc made of a noise-reducing material and, thus, teaches away from Arteaga, which teaches a cover to reduce the noise of a metal acoustic cymbal. There would be no reason to place a noise-reducing cover of Arteaga on the noise-reducing material of Green's disc. Green's disc is already noise-reducing without Arteaga's cover.

As such, neither reference provides sufficient motivation to combine features in the manner as suggested by the Examiner. Thus, for the reasons stated above there would also be no reason to combine Tanaka with Greene and Arteaga, as suggested by the Examiner. It is thus submitted that the Patent and Trademark Office has not made out a *prima facie* case of obviousness under the provisions of 35 U.S.C. 103(a).

Claims 32-34, 36, 37 and 47, which depend either directly or indirectly from Claim 31, are allowable for at least the same reasons as Claim 31. In addition, Claim 36 combines the flat upper surface of the peripheral edge portion with the annulus step of Claim 35. This is not taught by Greene or Arteaga.

New claim 48 depends directly from claim 31 and is, for at least this reason, believed to be allowable.

Furthermore, new claim 48 recites the electronic pad according to claim 31, "wherein the sheet sensor extends circumferentially along a part of said first frame around the peripheral edge, but not along all of the peripheral edge of the first frame."

Neither Greene, Arteaga nor Tanaka disclose or suggest the claimed invention, including the above-quoted features.

Neither Greene nor Arteaga, alone or in combination, disclose or suggest a sheet sensor located on an annulus step of the peripheral edge portion. Tanaka discloses a rim sensor 35 that extends around the entire circumference of the percussion instrument. Tanaka does not disclose or suggest that a sheet sensor extends circumferentially along a part of said first frame around the peripheral edge, but not along all of the peripheral edge of the first frame, as recited in new claim 48. Thus, for this additional reason, new claim 48 is believed to be allowable.

New claim 49 depends directly from claim 31 and is, for at least this reason, believed to be allowable.

In addition, new claim 49 recites the electronic pad according to claim 31, "wherein the step of the peripheral edge portion of the first frame is formed integrally with the first frame."

Neither Greene, Arteaga nor Tanaka disclose or suggest the claimed invention, including the above-quoted features.

Neither Greene, Arteaga nor Tanaka, alone or in combination, disclose or suggest a peripheral edge portion of the first frame having a downward step. In addition, neither Greene, Arteaga nor Tanaka, alone or in combination, disclose or suggest that "the step of the peripheral edge portion of the first frame is formed integrally with the first frame", as recited in applicants' new claim 49.

Arteaga discloses a sound muffling device 18 for a cymbal that comprises two parts. Arteaga's device 18 is formed from a disc 20 and an annular edge margin 24 that is laid onto the disc 20 and fused together with heat or affixed to the disc 20 using an adhesive. (See col. 3, lines 53-65.) Arteaga does not disclose or suggest that "the step of the peripheral edge portion of the first frame is formed integrally with the first frame", as recited in new claim 49. Thus, for this additional reason, new claim 49 is believed to be allowable.

New claims 50-56 recite features that are believed to be patentably distinct from the

prior art of record.

For example, claim 50 recites an electronic pad receiving a strike, detecting the strike and outputting a signal representative of the strike comprising, *inter alia*:

" a frame having an upper surface with an outer peripheral edge portion, at least a part of the outer peripheral edge portion having a step formed downward from the upper surface ".

None of the prior art of record disclose or suggest a peripheral edge portion of the first frame having a downward step. Thus, for at least this reason, new claim 50 is believed to be allowable.

New claim 55 recites an electronic pad receiving a strike, detecting the strike and outputting a signal representative of the strike comprising, *inter alia*:

" a striking sensor provided on a part of, but not the entire peripheral edge portion of the frame, the striking sensor for detecting the strike transmitted to the frame through the cover; and

a jack affixed to the frame and electrically coupled to the striking sensor for outputting signals from the striking sensor, the jack having an opening of a receiving space for receiving an electrical plug, the opening of the receiving space facing in a direction away from the part of the peripheral edge portion of the frame having the striking sensor."

None of the prior art of record disclose or suggest a striking sensor provided on "a part of, but not the entire peripheral edge portion" of the frame, as recited in new claim 55. Nor does any of the prior art of record disclose or suggest "a jack ... having an opening of a receiving space for receiving an electrical plug, the opening of the receiving space facing in a direction away from the part of the peripheral edge portion of the frame having the striking sensor", as recited in new claim 55. Thus, for at least this reason, new claim 55 is believed to be allowable.

In view of the following it is respectfully submitted that the present application, as amended, is in condition for allowance, and allowance of the claims at an early date is respectfully requested.

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